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## Editorial Engineering Emotion

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Where were you when Diego Armando Maradona scored the *goal of the century* in the 1986 world cup quarter finals against England? Where were you when Hermann Maier was thrown off the downhill-piste in a heart stopping moment in the 1998 Olympic Winter games in Nagano only to take gold in the Super-G event just three days later? Where were you when Greg LeMond beat Laurent Fignon in the final time trial stage to take the overall win of the 1989 Tour de France with a margin of only 8 seconds? Where were you when Jonah Lomu scored four tries for the All Blacks in the semi finals of the 1995 Rugby World Cup? Where were you when Carl Lewis won his four gold-medals in the 1984 Olympics? Where when Mark Spitz won seven gold in Munich, when Michael Phelps eight in Beijing, when Wayne Gretzky scored his 500<sup>th</sup> NHL-goal, when Haile Gebrselassie ran the Berlin Marathon 2008 in under 2:04 hours?

Can you remember the feeling when *YOU* scored your best and most spectacular soccer goal, when *you* carved the perfect turn in the snow, when *you* glided down a singletrail just enjoying the moment, when *you* beat your marathon personal best, when *you* climbed an 8+ wall for the first time?

Sure you do and sure you can recall the feeling and the situation. As you can recall the feelings you had when witnessing breathtaking sporting moments. There is no doubt that sport - either passively consumed or actively performed - is full of emotion.

The theme of this year's 8<sup>th</sup> ISEA Conference - *Engineering Emotion* seems a contradiction within itself at first sight. Engineering is based on facts; it is nothing but examining facts, examining those facts without emotion. It is about analyzing those facts and reacting according to those facts. There is definitely no room for emotion in engineering. But we as sports engineers are directly involved in creating these emotions making the quest for these emotions safer, more convenient, making goals easier to accomplish. By doing our job we contribute to the creation of emotion and therefore we are *Engineering Emotion*.

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We as editors are happy to have received such a large number of outstanding papers that span from sailing to ice-skating, from soccer to alpine-skiing and even touch such rare sporting jewels like hurling. It is interesting and encouraging that in addition to papers about able-bodied sports a significant number of papers has been submitted that deals with engineering developments for handicapped athletes.

This fact clearly points out that sports for the handicapped are becoming more and more accepted and important. It shows that people - disregarding their physical abilities - understand sports as an integral part of and for a fulfilled life. The achievements of handicapped athletes are increasing at a breathtaking speed. This definitely goes hand in hand with the application of new materials in sports equipment and its overall technical enhancement.

Along with this development an ethical problem of sports-engineering is becoming even more obvious. In how far is the achievement of athletes influenced by the quality of their equipment? You will find an interesting paper concerning this topic in these proceedings.

Furthermore it can be seen that the enhancement of the measuring devices, their miniaturisation and their higher accuracy as well as their more and more affordable pricing is leading to more exact and more convenient measurements of sports equipment making in-situ measurements possible in situations we could not even imagine some years ago.

Another interesting development is that simulations are widely used to predict the performance of sports equipment before constructing it, thus saving time and money before an extensive trial and error procedure. A development that will engulf ever widening areas of application.

No matter what the method, the sport, the material - there is one goal that is obvious in nearly all the papers in these proceedings. The goal to improve performance, to improve quality and/or to improve safety of the user.

We would like to express our gratitude to the sponsors who have supported us in these economically difficult times. The conference would not have been possible without the support of the University of Applied Sciences Technikum Wien, Kapsch AG, HEAD and the Austrian Federal Ministry of Science and Research.

We hope you will enjoy reading the interesting works of your colleagues and we sincerely hope you will enjoy the conference and the presentations. We thank all authors, the participants, the reviewers and the members of the scientific committee for their contribution to make the 8<sup>th</sup> Conference of the International Sports Engineering Association (ISEA) a success.

Anton Sabo, Patricia Kafka, Stefan Litzenberger and Christoph Sabo  
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